

Amendments to the Claims:

1. (Currently Amended) An apparatus comprising:

a monitor configured to monitor ~~more than one at least one~~ parameter related to an active connection between a mobile station and a support node, wherein the support node is within a core network of a cellular communications network, ~~and wherein said at least one parameter~~ more than one parameter includes a parameter comprising an indication of user inactivity; and

a determining unit configured to determine whether the connection between said support node and said mobile station is to be released based on ~~the more than one parameter; said at least one parameter monitored by said monitor,~~

wherein the apparatus is configured to cause the connection between the mobile station and the support node to be established, and further configured to cause the connection to be released in an instance in which there is user inactivity for a predetermined period of time by:

causing transmission of a release message to an entity within the core network of the cellular communications network, the release message comprising an indication of the reason for releasing the connection,

receiving a release command from the entity within the core network of the cellular communications network, and

in response to receiving the release command, causing a connection release message to be sent to the mobile station; and

wherein the apparatus is external to the core network of the cellular communications network.

- 2-3. (Cancelled)

4. (Previously Presented) The apparatus as claimed in claim 1, wherein said apparatus is further configured to cause sending of a message to the support node indicating that said connection has been released.

5. (Previously Presented) The apparatus as claimed in claim 1, wherein being configured to cause transmission of a release message includes being configured to cause sending of a release request for the connection to be released to said mobile station.

6. (Currently Amended) The apparatus as claimed in claim 5, wherein the apparatus is further configured to: ~~receive a connection release command in response to at least the release message;~~ and control the release of said connection.

7. (Cancelled)

8. (Previously Presented) The apparatus as claimed in claim 17, wherein said apparatus is further configured to cause sending of a message to said support node advising that the connection has been released.

9. (Currently Amended) An apparatus comprising:
a monitor configured to monitor ~~at least more than~~ one parameter related to an active connection between a mobile station and a support node, wherein the support node is within a core network of the cellular communications network, and wherein said at least more than one parameter includes a parameter comprising an indication of user inactivity based on an elapsed time since a last use of the connection; and

a determining unit configured to determine whether the connection between said support node and said mobile station is to be released based ~~solely on~~ said ~~at least more than~~ one parameter monitored by said monitor,

wherein the apparatus is configured to cause the connection between the mobile station and the support node to be established, and further configured to cause the connection to be released in an instance in which the connection has not been used for a predetermined time by:

causing transmission of a release message to an entity within the core network of the cellular communications network, the release message comprising an indication of the reason for releasing the connection,

receiving a release command from the entity within the core network of the cellular communications network, and

in response to receiving the release command, causing a connection release message to be sent to the mobile station; and

wherein the apparatus is external to the core network of the cellular communications network.

10. (Previously Presented) The apparatus as claimed in claim 9, wherein the predetermined time depends on the type of traffic for which the connection is intended.

11. (Previously Presented) The apparatus as claimed in claim 9, wherein the predetermined time depends on the quality of service profile of the traffic for which the connection is intended.

12. (Currently Amended) An apparatus comprising:

a monitor configured to monitor at least more than one parameter related to an active connection between a mobile station and a support node, wherein the support node is within a core network of a cellular communications network, and wherein said at least more than one parameter includes a parameter comprising an indication of user inactivity based on a state of said mobile station; and

a determining unit configured to determine whether the connection between said support node and said mobile station is to be released based on said at least one parameter monitored by said monitor,

wherein the apparatus is configured to cause the connection between the mobile station and the support node to be established, and further configured to cause the connection to be released based on the state of the mobile station by:

causing transmission of a release message to an entity within the core network of the cellular communications network, the release message comprising an indication of the reason for releasing the connection,

receiving a release command from the entity within the core network of the cellular communications network, and

in response to receiving the release command, causing a connection release message to be sent to the mobile station; and

wherein the apparatus is external to the core network of the cellular communications network.

13. (Currently Amended) An apparatus comprising:

a monitor configured to monitor at least more than one parameter related to an active connection between a mobile station and a support node, wherein the support node is within a core network of a cellular communications network, and wherein said at least more than one parameter includes a parameter comprising an indication of inactivity based on movement of the mobile station; and

a determining unit configured to determine whether the connection between said support node and said mobile station is to be released based on said at least one parameter monitored by said monitor,

wherein the apparatus is configured to cause the connection between the mobile station and the support node to be established, and further configured to cause the connection to be released based on the movement of the mobile station by:

causing transmission of a release message to an entity within the core network of the cellular communications network, the release message comprising an indication of the reason for releasing the connection,

receiving a release command from the entity within the core network of the cellular communications network, and

in response to receiving the release command, causing a connection release message to be sent to the mobile station; and

wherein the apparatus is external to the core network of the cellular communications network.

14. (Previously Presented) The apparatus as claimed in claim 13, wherein an amount of updating information received in a given time from the mobile station is used as a measure of the movement of the mobile station.

15. (Previously Presented) The apparatus as claimed in claim 14, wherein said updating information comprises universal mobile telecommunication systems terrestrial radio access network registration area updates.

16. (Currently Amended) An apparatus comprising:
a monitor configured to monitor ~~at least more than~~ one parameter related to an active connection between a mobile station and a support node, wherein the support node is within a core network of a cellular communications network, and wherein said at least more than one parameter includes a parameter comprising an indication of inactivity based on a location of the mobile station; and

a determining unit configured to determine whether the connection between said support node and said mobile station is to be released based on said at least one parameter monitored by said monitor,

wherein the apparatus is configured to cause the connection between the mobile station and the support node to be established, and further configured to cause the connection to be released based on the location of the mobile station by:

causing transmission of a release message to an entity within the core network of the cellular communications network, the release message comprising an indication of the reason for releasing the connection,

receiving a release command from the entity within the core network of the cellular communications network, and

in response to receiving the release command, causing a connection release message to be sent to the mobile station; and

wherein the apparatus is external to the core network of the cellular communications network.

17. (Currently Amended) The apparatus as claimed in claim 16, wherein said at ~~least more than~~ one parameter further comprises associations of the mobile station with different apparatuses, and said determining unit being further configured to determine that the connection

should be released in an instance in which said monitor indicates that the mobile station is associated with a different apparatus.

18. (Cancelled)

19. (Previously Presented) A cellular communications network, comprising: the apparatus as claimed in claim 1, the mobile station and the support node.

20. (Cancelled)

21. (Previously Presented) The cellular communications network as claimed in claim 19, wherein said support node is a serving general packet radio service support node.

22. (Previously Presented) The cellular communications network as claimed in claim 19, wherein said network operates in accordance with a universal mobile telecommunication systems standard.

23. (Previously Presented) The apparatus as claimed in claim 108, wherein said apparatus is further directed to cause sending of a message to the support node advising that the connection has been released.

24-76. (Cancelled)

77. (Previously Presented) A cellular communications network, comprising: the apparatus as claimed in claim 108, the mobile station and the support node.

78. (Cancelled)

79. (Previously Presented) A cellular communications network, comprising: the apparatus as claimed in claim 4, the mobile station and the support node.

80. (Previously Presented) A cellular communications network, comprising: the apparatus as claimed in claim 5, the mobile station and the support node.

81. (Previously Presented) A cellular communications network, comprising:
the apparatus as claimed in claim 6, the mobile station and the support node.
82. (Previously Presented) A cellular communications network, comprising:
the apparatus as claimed in claim 7, the mobile station and the support node.
83. (Previously Presented) A cellular communications network, comprising:
the apparatus as claimed in claim 8, the mobile station and the support node.
84. (Previously Presented) A cellular communications network, comprising:
the apparatus as claimed in claim 9, the mobile station and the support node.
85. (Previously Presented) A cellular communications network, comprising:
the apparatus as claimed in claim 10, the mobile station and the support node.
86. (Previously Presented) A cellular communications network, comprising:
the apparatus as claimed in claim 11, the mobile station and the support node.
87. (Previously Presented) A cellular communications network, comprising:
the apparatus as claimed in claim 12, the mobile station and the support node.
88. (Previously Presented) A cellular communications network, comprising:
the apparatus as claimed in claim 13, the mobile station and the support node.
89. (Previously Presented) A cellular communications network, comprising:
the apparatus as claimed in claim 14, the mobile station and the support node.
90. (Previously Presented) A cellular communications network, comprising:
the apparatus as claimed in claim 15, the mobile station and the support node.
91. (Previously Presented) A cellular communications network, comprising:
the apparatus as claimed in claim 16, the mobile station and the support node.

92. (Previously Presented) A cellular communications network, comprising:
the apparatus as claimed in claim 17, the mobile station and the support node.

93-95. (Cancelled)

96. (Previously Presented) The cellular communications network as claimed in claim 21, wherein said cellular communications network operates in accordance with a universal mobile telecommunication systems standard.

97. (Currently Amended) A method, comprising:
monitoring ~~at least more than~~ one parameter related to an active connection between a mobile station and a support node, wherein the support node is within a core network of a cellular communications network, and wherein said at least one parameter comprising an indication of user inactivity;

determining, at a network entity that is external to the core network of the cellular communications network, whether the connection between said support node and said mobile station is to be released based on said ~~at least more than~~ one parameter ~~monitored~~; and

causing the connection to be released based on said ~~at least more than~~ one parameter by:

causing transmission of a release message to an entity within the core network of the cellular communications network, the release message comprising an indication of the reason for releasing the connection;

receiving a release command from the entity within the core network of the cellular communications network; and

in response to receiving the release command, causing a connection release message to be sent to the mobile station.

98. (Currently Amended) An apparatus, comprising a computing device, the computing device being configured to direct the apparatus processor and at least one memory including computer program code, the at least one memory and the computer program code configured to, with the processor, cause the apparatus at least to:

monitor at least more than one parameter related to an active connection between a mobile station and a support node, wherein the support node is within a core network of a cellular communications network, and wherein said at least more than one parameter includes a parameter comprising an indication of user inactivity based on a state of said mobile station;

determine whether the connection between said support node and said mobile station is to be released based on said at least more than one parameter; and

cause the connection to be released based on said at least more than one parameter by:

causing transmission of a release message to an entity within the core network of the cellular communications network, the release message comprising an indication of the reason for releasing the connection,

receiving a release command from the entity within the core network of the cellular communications network, and

in response to receiving the release command, causing a connection release message to be sent to the mobile station; and

wherein the apparatus is external to the core network of the cellular communications network.

99. (Currently Amended) A method, comprising:

monitoring at least more than one parameter related to an active connection between a mobile station and a support node, wherein the support node is within a core network of a cellular communications network, and wherein said at least more than one parameter includes a parameter comprising an indication of user inactivity based on a state of said mobile station;

determining, at a network entity that is external to the core network of the cellular communications network, whether the connection between said support node and said mobile station is to be released based on said at least one parameter; and

causing the connection to be released based on said at least one parameter by:

causing transmission of a release message to an entity within the core network of the cellular communications network, the release message comprising an indication of the reason for releasing the connection;

receiving a release command from the entity within the core network of the cellular communications network, and
in response to receiving the release command, causing a connection release message to be sent to the mobile station.

100. (Previously Presented) The apparatus of claim 98, wherein said support node is a serving general packet radio service support node.

101. (Cancelled)

102. (Currently Amended) The apparatus as claimed in claim 1, wherein said apparatus is further configured to cause releasing of the connection between the support node and said mobile station dependent solely on ~~only~~ the more than one parameter monitored by said monitor.

103. (Currently Amended) The method as claimed in claim 99, wherein determining whether the connection is to be released includes determining whether the connection is to be released based solely on ~~only~~ the more than one parameter monitored.

104. (Cancelled)

105. (Currently Amended) The method as claimed in claim 99, wherein the monitoring comprises monitoring ~~only~~ more than one parameter related to the connection between the mobile station and the support node, and wherein the determining comprises determining to release the connection between a network element and said mobile station based solely on the ~~only~~ more than one monitored parameter.

106. (Currently Amended) An apparatus comprising:
monitoring means for monitoring ~~at least~~ more than one parameter related to an active connection between a mobile station and a support node, wherein the support node is within a core network of a cellular communications network, said ~~at least~~ more than one parameter

including a parameter comprising an indication of user inactivity based on an elapsed time since a last use of the connection; and

determining means for determining whether the connection between said support node and said mobile station is to be released based on said at least more than one parameter ~~monitored by said monitoring means,~~

wherein the apparatus is configured to cause the connection between the mobile station and the support node to be established, and further configured to cause the connection to be released in an instance in which the connection has not been used for a predetermined time by;

causing transmission of a release message to an entity within the core network of the cellular communications network, the release message comprising an indication of the reason for releasing the connection,

receiving a release command from the entity within the core network of the cellular communications network, and

in response to receiving the release command, causing a connection release message to be sent to the mobile station, and

wherein the apparatus is external to the core network of the cellular communications network.

107. (Currently Amended) An apparatus comprising:

monitoring means for monitoring at least more than one parameter related to an active connection between a mobile station and a support node, said at least more than one parameter including a parameter comprising an indication of user inactivity based on a state of said mobile station; and wherein the support node is within a core network of a cellular communications network,

determining means for determining whether the connection between said support node and said mobile station is to be released based on said at least more than one parameter ~~monitored by said monitoring means,~~

wherein the apparatus is configured to cause the connection between the mobile station and the support node to be established, and further configured to cause the connection to be released based on the state of the mobile station by:

causing transmission of a release message to an entity within the core network of the cellular communications network, the release message comprising an indication of the reason for releasing the connection,

receiving a release command from the entity within the core network of the cellular communications network, and

in response to receiving the release command, causing a connection release message to be sent to the mobile station; and

wherein the apparatus is external to the core network of the cellular communications network.

108. (Currently Amended) An apparatus comprising computing device, the computing device being configured to direct the apparatus a processor and a memory including computer program code, the memory and the computer program code configured to, with the processor, cause the apparatus at least to:

monitor at least more than one parameter related to an active connection between a mobile station and a support node, wherein the support node is within a core network of a cellular communications network, and wherein said at least more than one parameter includes a parameter comprising an indication of user inactivity;

determine whether the connection between said support node and said mobile station is to be released based on said at least more than one parameter monitored;

cause the connection to be released in an instance in which there is user inactivity for a predetermined period of time by:

causing transmission of a release message to an entity within the core network of the cellular communications network, the release message comprising an indication of the reason for releasing the connection,

receiving a release command from the entity within the core network of the cellular communications network, and
in response to receiving the release command, causing a connection release message to be sent to the mobile station; and

wherein the apparatus is external to the core network of the cellular communications network.

109. (Currently Amended) An apparatus comprising:

monitoring means for monitoring at least more than one parameter related to an active connection between a mobile station and a support node, wherein the support node is within a core network of a cellular communications network, said at least more than one parameter including a parameter comprising an indication of user inactivity based on a location of the mobile station; and

determining means for determining whether the connection between said support node and said mobile station is to be released based on said at least more than one parameter ~~monitored by said monitoring means~~,

wherein the apparatus is configured to cause the connection between the mobile station and the support node to be established, and further configured to cause the connection to be released based on the location of the mobile station by:

causing transmission of a release message to an entity within the core network of the cellular communications network, the release message comprising an indication of the reason for releasing the connection,

receiving a release command from the entity within the core network of the cellular communications network, and
in response to receiving the release command, causing a connection release message to be sent to the mobile station; and

wherein the apparatus is external to the core network of the cellular communications network.

110. (Currently Amended) A computer readable storage medium encoded with instructions that, if executed by a computer, perform a process, the process comprising:

directing establishment of an active connection between a mobile station and a support node in a communication network through a radio network controller;

monitoring, at the radio network controller, ~~at least~~more than one parameter related to the connection between the mobile station and the support node, where the more than one parameter includes a parameter comprising an indication of a user inactivity;

determining, at the radio network controller, whether the connection between said support node and said mobile station is to be released based on said ~~at least~~more than one parameter; and

directing releasing, by the radio network controller, of the connection between said support node and said mobile station based on said ~~at least~~more than one parameter by:

causing transmission of a release message to an entity within the core network of the cellular communications network, the release message comprising an indication of the reason for releasing the connection,

receiving a release command from the entity within the core network of the cellular communications network, and

in response to receiving the release command, causing a connection release message to be sent to the mobile station;; and

wherein the support node is within a core network of the cellular communications network, and

wherein the radio network controller is external to the core network of the cellular communications network.

111. (Currently Amended) The computer readable storage medium as claimed in claim 110, wherein ~~said at least one parameter comprises user activity, and~~ determining to release said connection in an instance in which there is user inactivity for a predetermined period of time.

112. (Cancelled)

113. (Currently Amended) The computer readable storage medium as claimed in claim 110, wherein the monitoring comprises monitoring only the more than one parameter related to the connection between the mobile station and the support node, wherein the determining comprises determining to release the connection between a network element and said mobile station based solely on the only more than one monitored parameter.

114. (Previously Presented) The apparatus of claim 1, wherein the apparatus is a radio network controller.

115. (Previously Presented) The apparatus of claim 9, wherein the apparatus is a radio network controller.

116. (Previously Presented) The apparatus of claim 12, wherein the apparatus is a radio network controller.

117. (Previously Presented) The method as claimed in claim 97, further comprising causing a message to be sent to the support node indicating that said connection has been released.

118. (Previously Presented) The method as claimed in claim 97, wherein causing transmission of the release message includes causing transmission of the release message to said mobile station as a request for the connection to be released.

119. (Currently Amended) The method as claimed in claim 97, further comprising:
~~receiving a connection release command from the support node in response to at least the release message; and~~
controlling the release of said connection.